ACME STEEL/METAL WORKS (DAR SITE ID #100)

Address:	95 Lombardy Street, Brooklyn, Kings County, New York 11222 (also known as ACME Architectural Products, Inc., ACME Steel Partition, and ACME Steel Door)
Tax Lot Parcel(s):	Brooklyn Block 2819, Lots 8 and11
Latitude:	40.723143
Longitude:	-73.936474
Regulatory Programs/ Numbers/Codes:	NYSDEC No. 224131, USEPA ID No. NYD986939528, IWD Permit No. P-2689/P-1324, NYSDEC Spill No. 9311872, PBS No. 2-477702 and 2-603942.
Analytical Data Status:	☐ Electronic Data Available ☒ Hardcopies only ☐ No Data Available

1 SUMMARY OF CONSTITUENTS OF POTENTIAL CONCERN (COPCs) TRANSPORT PATHWAYS TO THE CREEK

The current understanding of the transport mechanisms of contaminants from the upland portions of the ACME Steel/Metal Works site (site) to Newtown Creek is summarized in this section and Table 1 and supported in the following sections.

Overland Transport

The site is located approximately 0.35 mile from Newtown Creek and associated waterways. This is not a complete historical or current pathway.

Bank Erosion

The site is not adjacent to Newtown Creek or associated waterways. This is not a complete historical or current pathway.

Groundwater

As part of the Meeker Avenue Plume Trackdown study conducted by URS Corporation (URS) on behalf of the New York State Department of Environmental Conservation (NYSDEC), this site has been identified as a source of groundwater contamination.

Monitoring wells, groundwater, and soil-gas samples indicate significant trichloroethene (TCE) contamination along with some degree of tetrachloroethene (PCE) contamination at the site (URS 2008a; EDR 2010). Site records indicated the use of a former underground storage tank (UST) as a degreasing dip tank and TCE chemical storage area (Langan 2011). Two separate groundwater plumes, a TCE plume originating at the site and east of the site, and a PCE plume originating south of the site, are present.

Groundwater flow is to the northeast, suggesting the COPCs are also moving to the northeast towards the creek. This pathway is potentially currently complete; however, there is insufficient evidence to make a historical pathway determination.

Overwater Activities

This site is not adjacent to Newtown Creek or associated waterways and has no overwater activities. This is not a complete historical or current pathway.

Stormwater/Wastewater Systems

Information regarding on-site stormwater infrastructure and management was not identified in documents available for review. This site is located within the Newtown Creek Water Pollution Control Plant (WPCP) sewershed. Some portion of stormwater and wastewater discharges from the site flow into a combined municipal sewer system. When the combined flows exceed the system's capacity, untreated combined sewer overflows (CSOs) are discharged to Newtown Creek at multiple outfalls (NYCDEP 2007). Additionally, some wastewater at the site was discharged through floor drains near process areas to unknown outfalls (IEC 1998; Langan 2011). There is insufficient evidence to make a historical or current pathway determination for direct discharge of stormwater, wastewater, and the sewer/CSO.

Air Releases

Information related to air discharges was not located for this site. A Title V Facility Air Permit exists for this site. The permit applies to the combined emissions of all buildings used in ACME Architectural Products, Inc., manufacturing. No emissions reporting or source testing data was found in material reviewed. There is insufficient evidence to make a historical or current pathway determination.

2 PROJECT STATUS

No available documents containing environmental investigations were reviewed for this site. The site was listed on the Registry of Inactive Waste Disposal Sites (NYSDEC 2011). In December 2010, the Whitehead Company and NYSDEC entered into an Order on Consent to prepare a separate site-specific Remedial Investigation (RI) work plan to identify sources of chlorinated volatile organic compounds (CVOCs) to the extent they may be present (Langan 2011). At the time this summary was prepared, the RI work plan was being reviewed by NYSDEC but had not been finalized (NYSDEC 2011).

The site was identified as a Resource Conservation and Recovery Act (RCRA) small quantity generator (SQG) in 1991 and a non-generator in 1999, 2006, and 2007 (EDR 2010). The site's U.S. Environmental Protection Agency's (USEPA's) ID No. is NYD986939528.

Activity		Date(s)/Comments
Phase 1 Environmental Site Assessment	☒	03/30/98
Site Characterization	☐	
Remedial Investigation	☒	In progress
Remedy Selection	☐	
Remedial Design/Remedial Action Implementation	☐	
Use Restrictions (Environmental Easements or Institutional Controls)	☐	
Construction Completion	☐	
Site Closeout/No Further Action Determination	☐	

3 SITE OWNERSHIP HISTORY

Respondent Member: ☐ Yes ☒ No

Owner	Dates	Occupant	Types of Operations
95 Lombardy Street Realty Corporation	1927 – 1981	Hygrade Iron Works	Fabricated structural steel work, miscellaneous and ornamental ironworks
Whitehead Company	1977 – 1998		

Owner	Dates	Occupant	Types of Operations
	1981 – 1995	ACME Steel Partition Company	Manufacture of steel doors and frames, steel and glass partitions
	1995 – 1998	ACME Architectural Products, Inc.	Manufacture of steel doors and frames, steel and glass partitions
New York City Industrial Development Agency	1998 – present		
	1998 – 2011	ACME Architectural Products, Inc.	Manufacture of steel doors and frames, steel and glass partitions
Whitehead Company, LLC	2011		
95 Lombardy Street, LLC	2011		

Note:
Additional discussion and sources provided in Section 6.

4 PROPERTY DESCRIPTION

The property occupies approximately 1 acre along Anthony Street and Porter Avenue in Brooklyn, New York. The property is located 0.6 mile to the west of Newtown Creek and is between 45 and 50 feet above mean sea level. A slight rise in the regional topography is located to the east of the property, causing the ground to slope away from the site to the west (see Figure 1). The property is occupied by a large building and is located close to two other environmentally regulated sites—ACME Steel/Brass Foundry to the east and Greenpoint Energy Center to the southeast (see Figure 1).

The property and the area surrounding are zoned manufacturing with residential and park areas beyond. The property is adjacent to several other large structures including several additional structures, which are also part of ACME Architectural, Inc., manufacturing in the surrounding blocks. These additional facilities associated with ACME Architectural, Inc., manufacturing include properties at 211 Lombardy Street, 513 Porter Avenue, and 60 and 72 Anthony Street (EDR 2010).

5 CURRENT SITE USE

The site was most recently used by ACME Architectural Products as part of metal fabrication and painting operations. The company manufactured steel and glass doors, demountable wall and door products. A drawing of the facility floor plan from 1995 is included as Attachment 1 (ACME Steel Door 1995; ACME Architectural Products 2012). A site inspection conducted in 2011 found the building to be vacant (Langan 2011).

6 SITE USE HISTORY

Hygrade Iron Works, Inc., formed in 1927, but it is not clear when they began operations at 95 Lombardy Street. An associated company that purchased the site, 95 Lombardy Street Realty Corporation, Inc., formed in 1931 (NYSDOS 2011a, 2011b). Hygrade's operations comprised a small parcel at the northeast corner of Lombardy Street and Vandervoort Avenue (Sanborn 1933). In 1963, Hygrade described their operation as "fabricated structural steel work" and in 1975 as "miscellaneous and ornamental ironworks" (NYS 1963, 1975).

In 1981, ACME Steel Partition, Co. began refurbishment, adaptation, and expansion of the site for the manufacture of steel doors, frames, and office partitions, and glass office partitions (Berjac Company 1981). In 1998, the Whitehead Company sold the property to the New York City Industrial Development Agency, which in turn signed a lease with Whitehead to perform additional refurbishment of the site and to continue ACME's operations (Whitehead Company 1998; NYCIDA 1998)

ACME's facilities at 95 Lombardy Street, also known as Building 5, included a dip tank for painting metal components and a drying oven used to dry painted parts (NYSDEC 2000, 2007). In 2005, facility operations included the fabrication of components for doors as ordered by customers, cleaning the components, immersing the components in a dip tank with paint, and then drying the parts in an oven (USEPA 2005). The building is 24,500 square feet, consuming the entire parcel of land, and was renovated between 1998 and 2011 (ACME Architectural Products, Inc. 2011). A site inspection conducted in 2011 found the building to be vacant (Langan 2011).

7 CURRENT AND HISTORICAL AREAS OF CONCERN AND COPCs

The current understanding of the historical and current potential upland and overwater areas of concern at the site is summarized in Table 1. The following sections provide brief discussion of the potential sources and COPCs at the site requiring additional discussion.

7.1 Uplands

As noted previously, the site is currently vacant but was historically used for iron works, metal shearing, and metal finishing operations (Langan 2011). A Phase 1 Environmental Site Assessment (ESA) conducted in 1998 identified several areas of concern, including the following (IEC 1998; Langan 2011):

- Two aboveground storage tanks (ASTs) used as part of an on-site wastewater treatment system
- Numerous floor drains with unknown outfalls
- One active fuel oil UST, a potential former UST, and petroleum impacted soil
- A UST used as a dip tank and to store degreasing products as part of the dip bath and paint booth operations

Records reviewed while preparing this summary indicate that there were two USTs located on the site at one time under petroleum bulk storage (PBS) No. 2-603941. An additional PBS registration for two USTs was identified for ACME Steel Corp. at 211 Lombardy Street (PBS No.2-477702; NYSDEC 2012). The USTs are summarized in the following table (NYSDEC 2012):

Tank ID	Date Installed	Tank Status	Tank Location	Capacity (gallons)	Product
PBS No. 2-603942					
1	NR	Closed in place – No date reported	UST	8,500	No. 6 fuel oil
2	NR	Closed in place – No date reported	UST	1,080	No. 6 fuel oil
PBS No. 2-603942 (at 211 Lombardy Street)					
001	08/01/78	Closed in place 08/01/91	UST	8,000	No. 2 fuel oil
002	09/01/85	Closed in place 10/01/99	UST	8,000	No. 2 fuel oil

Notes:
NR – not reported PBS – petroleum bulk storage UST – underground storage tank

Records indicated that wastewater at the site was discharged through floor drains near process areas to unknown outfalls or was collected and circulated through two ASTs (IEC 1998; Langan 2011). This collected or recirculated wastewater was treated prior to discharge to the combined sewer system or discharged via a direct drainage line to the creek. Regulated waste generated at the site was transported to the 72 Anthony Street site and stored in the chemical storage area outside the building (IEC 1998; Langan 2011).

COPCs for the site include volatile organic compounds (VOCs), petroleum products (fuel oils), and petroleum waste products from machinery. Manifests for wastes shipped off site listed the waste code F001 containing 1,1,1-trichloroethane were sent off site (ACME Steel Door 1991).

7.2 Overwater Activities

This site is not adjacent to Newtown Creek or associated waterways and did not have overwater activities.

7.3 Spills

Documented spills at the site are summarized as follows:

NYSDEC Spill No.	Spill Date	Close Date	Material Spilled	Remarks
9311872	01/06/94	01/07/94	No. 4 Fuel Oil	Undeterminable amount of fuel oil was spilled and corrective action taken.

Note:
NYSDEC – New York State Department of Environmental Conservation

8 PHYSICAL SITE SETTING

8.1 Geology

Surface topography in the area ranges from 6 feet above mean sea level at Newtown Creek, to 56 feet above mean sea level northeast of the site (URS 2007). The site elevation is approximately 40 feet above mean sea level at its western border and approximately 48 feet above mean sea level at the eastern border. Subsurface data collected in the vicinity of the

site indicates that the site is underlain from the surface downward by a fill unit, a sand unit of varying textures, a discontinuous till unit, and a discontinuous clay/silt unit. The fill unit ranges from 0 to 9 feet thick and consists of a heterogeneous mixture of sand, silt, clay, and varying amounts of construction and demolition debris. The sand unit varies greatly in texture and its entire thickness has not been penetrated. The discontinuous till units is a heterogeneous mixture of sand, silt, and clay with varying amounts of gravel, cobbles, and boulders. The discontinuous clay unit is an inclusive layer within the sand unit and ranges from 0.5 to 10 feet thick (URS 2007).

8.2 Hydrogeology

The primary hydrologic unit in the area is an unconfined surficial aquifer in the sand unit (URS 2008b). The water table at the western boundary of the site is approximately 4 feet above mean sea level. A perched water table is seen in a well located to the eastern edge of the property where a less permeable till unit is present above the sand unit. Depth to water measurements in both shallow and deep wells indicate that groundwater flow is to the northeast towards the groundwater collection system operating on the ExxonMobil property. Horizontal gradients at the site are generally very shallow, ranging from less than 0.001 feet/feet to 0.004 feet/feet with the steepest gradient seen southwest of the site (URS 2008b).

9 NATURE AND EXTENT (CURRENT UNDERSTANDING OF ENVIRONMENTAL CONDITIONS)

9.1 Soil

Soil Investigations	☐ Yes ☒ No
Bank Samples	☐ Yes ☐ No ☒ Not Applicable
Soil-Vapor Investigations	☒ Yes ☐ No

9.1.1 Soil Investigations

There is no record of soil investigations conducted specifically for the site. However, soil investigations have been conducted in the immediate area by URS on behalf of the NYSDEC as part of the Meeker Avenue Plume Trackdown study from 2007 to 2009 (URS 2009b). As part of the larger plume study, five phases of site characterization, including soil, soil-gas,

and groundwater, have been conducted. The area covered by this investigation is bounded by Kingsland Avenue to the west, Norman Avenue and Bridgewater Avenue to the north, Newtown Creek to the northeast, Lombardy Street to the south-southeast, and Withers Street at Morgan Avenue to the southwest (see Attachment 2). The study focused on three primary source areas of contamination: Area 1 to the southwest bounded by Meeker Avenue to the north, Porter Avenue to the east, Withers Street to the south, and Morgan Avenue to the west; Area 2 to the southeast bounded by Meeker Avenue to the north, Newtown Creek to the east, Lombardy Street to the south, and Porter Avenue to west; and Area 3 to the northwest bounded by Norman Street to the north, Apollo Street to the east, Meeker Avenue to the south, and Monitor Street and Kingsland Avenue to the west (URS 2008b).

The site is located within Area 1 of the larger plume study area (see Attachment 3) where approximately four deep and 29 shallow groundwater wells were installed throughout the course of the URS investigations from 2007 to 2009 (URS 2007, 2008b). Soil borings were advanced using 4.25-inch inside diameter (ID) hollow stem augers (HSAs) and split spoon samples were collected continuously using standard penetration techniques (ASTM D1586-84) unless an obstruction was encountered. Samples were field screened with a photoionization detector (PID). Up to two samples from each boring were kept for laboratory analysis, one from the interval just above the water table and one from the interval exhibiting odors, staining, and the highest PID readings. Only the sample just above the water table was kept for borings where elevated PID readings were not encountered. More than two samples may have been kept for borings where multiple high PID readings were encountered. A total of 33 soil samples were submitted for analysis from Area 1, three of which were from the two borings on site (URS 2007, 2008b).

No soil samples collected during the URS investigation from Area 1 (which includes the site) had exceedances of Technical and Administrative Guidance Memorandums (TAGM) 4046 criteria (URS 2007, 2008a, 2008b).

9.1.2 Soil-gas Samples

A soil-gas investigation has been conducted in the immediate area by URS on behalf of NYSDEC as part of the Meeker Avenue Plume Trackdown study from 2007 to 2009, as

discussed in Section 9.1.1. A total of 43 soil-gas samples were collected from 34 soil-gas conduits in Area 1 of the Meeker Avenue Plume Trackdown study area throughout Phases I, II, and III of the URS investigations (URS 2007, 2008a, 2008b). One of these conduits, SG-038, is located along Vandervoort Avenue to the west of the site. Sampling results for this conduit show elevated concentrations of PCE, TCE, 1,1,1-Trichloroethane, 1,1-Dichloroethane, 1,1-Dichloroethene, and 1,2-Dichloroethene (cis). Select soil-gas sampling results collected in the vicinity of the site are summarized in the following table:

Analyte	Units	Soil Gas Concentrations at SG-038
1,1,1-Trichloroethane	µg/m^3	270
1,1-Dichloroethane	µg/m^3	3.4
1,1-Dichloroethene	µg/m^3	11
1,2-Dichloroethene (cis)	µg/m^3	6.9
Tetrachloroethene (PCE)	µg/m^3	1,000
Trichloroethene (TCE)	µg/m^3	2,100

Note:
µg/m^3 – microgram per cubic meter

The contamination seen in these conduits located adjacent to the site is part of a larger contaminant plume in this area (URS 2008b). PCE and TCE isometric contour maps developed by URS showing the extent of soil-gas contamination as characterized by the Meeker Avenue Plume Trackdown study are provided in Attachments 7 and 8.

9.1.3 Soil Summary

No soil investigations have been conducted specifically for the site. However, as part of the Meeker Avenue Plume Trackdown study investigations conducted by URS on behalf of NYSDEC, soil samples have been collected near the site. Soil analytical results show no exceedances of TAGM 4046 criteria for soil in the vicinity of the site. Soil-gas samples demonstrating chlorinated solvent impacts have also been collected in the vicinity of the site.

9.2 Groundwater

Groundwater Investigations	☐ Yes ☒ No
NAPL Presence (Historical and Current)	☐ Yes ☒ No
Dissolved COPC Plumes	☐ Yes ☒ No
Visual Seep Sample Data	☐ Yes ☐ No ☒ Not Applicable

9.2.1 Groundwater Investigations

There is no record of groundwater investigations conducted specifically for the site. However, groundwater beneath the site and the surrounding area has been investigated by URS on behalf of the NYSDEC as part of the Meeker Avenue Plume Trackdown study from 2007 to 2009, as discussed in Section 9.1.1. A total of 36 groundwater wells are located within Area 1 of the larger plume study area; six of the 36 are located adjacent to the site (see Attachment 4). A total of 13 groundwater samples have been collected from the six wells adjacent to the site (URS 2007, 2008a, 2008b).

PCE and TCE were detected above the Technical and Operational Guidance Series (TOGS) No. 1.1.1 Class GA groundwater criteria in most groundwater samples collected at the site (URS 2007, 2008a, 2008b). Other constituents with exceedances in at least one sample include, but are not limited to, 1,1,2-Trichloroethene, 1,1-Dichloroethane, and 1,2-Dichloroethene (cis and trans). Select groundwater sampling results, which exceeded criteria for these wells adjacent to the site, are summarized in the following table:

Analyte	Units	Minimum Groundwater Concentration	Maximum Groundwater Concentration	Location of Max value
1,1,2-Trichloroethene	µg/L	ND	10 J	DEC-039
1,1-Dichloroethene	µg/L	ND	7.4	DEC-22D
1,2-Dichloroethene (cis)	µg/L	ND	3,200	DEC-005D
1,2-Dichloroethene (trans)	µg/L	ND	210	DEC-005D
Tetrachloroethene (PCE)	µg/L	ND	1,100	DEC-005D
Trichloroethene (TCE)	µg/L	ND	70,000	DEC-005D

Notes:
µg/L – microgram per liter
D – result reported from a secondary dilution analysis
J – reported concentration is an estimated value
ND – not detected, detection limits not provided in source documents

9.2.2 Dissolved Contaminant Plume

Throughout Phases I, II, and III of the URS Meeker Avenue Plume Trackdown study, a total of 66 groundwater samples collected from 32 shallow (29 newly installed NYSDEC wells and three existing ExxonMobil wells) and four deep (newly installed NYSDEC wells) monitoring wells located within Area 1 of the larger plume study area were analyzed for Target Compound List (TCL) VOCs plus Tentatively Identified Compounds (TICs) following USEPA SW846 Method 8260B (URS 2007, 2008b). CVOCs, primarily PCE and TCE, were detected above their respective TOGS No. 1.1.1 Class GA groundwater criteria in most samples (URS 2007, 2008b). Other constituents with exceedances in at least one sample include 1-1-dichloroethane, 1-1-dichloroethene, 1-2-dichloroethane, 1-2-dichloroethene (cis and trans), acetone, benzene, methyl tert-butyl ether (MTBE), toluene, trichlorofluoromethane, and vinyl chloride.

Large PCE and TCE plumes have been identified under and beyond the site (URS 2007, 2008b). The plumes have been investigated as part of the Meeker Avenue Plume Trackdown study. Select groundwater sampling results, which exceeded criteria from across the study area, are summarized in the following table:

Analyte	Units	Minimum Groundwater Concentration	Maximum Groundwater Concentration
1,1-Dichloroethane	µg/L	ND	29.00
1,1-Dichloroethene	µg/L	ND	39.00
1,2-Dichloroethane	µg/L	ND	100.0
1,2-Dichloroethene (cis)	µg/L	ND	1,200
1,2-Dichloroethene (trans)	µg/L	ND	210.0
Tetrachloroethene (PCE)	µg/L	ND	33,000
Trichloroethene (TCE)	µg/L	ND	70,000
Vinyl chloride	µg/L	ND	28.00

Notes:
µg/L – microgram per liter
ND – not detected, detection limits not provided in source documents

Attachments 5 and 6 present isometric contour maps for both PCE and TCE (URS 2008b). As shown in the attachments, the PCE plume beneath the site originates southwest of the site near the former Klink Cosmo property and extends north to the Brooklyn-Queens Expressway at Varick Avenue. Other sources of PCE have also been identified to the east of the site near the southwest corner of Area 2, and as a result the total extent of the PCE plume originating near the Klink Cosmo site has not been determined (URS 2007, 2008b). The TCE plume originates at the ACME site and at the neighboring ACME property to the east and extends from the Brooklyn-Queens Expressway in the north to the Klink Cosmo site in the south and from Stewart Avenue in the east to the vicinity of Morgan Avenue in the west (URS 2008b).

A complete determination of plume fate cannot be determined based on the results from the URS investigations. Comprehensive sampling was only conducted during Phases I and II of URS's investigation and as a result, a temporal trend for the plume in the vicinity of the site cannot be determined. As shown in the isometric contours the data does suggest that the plume is moving to the northeast towards the Off-Site System operated by ExxonMobil (URS 2008b).

9.2.3 Groundwater Summary

Large TCE and PCE plumes exist in the area surrounding the site. It was concluded in the Phase III Site Characterization Report that the site and the neighboring ACME site to the east are the primary sources of TCE in this area (URS 2008b). The site was not recognized as a source of PCE. Groundwater flow at the site is in a northeasterly direction suggesting the transport of plumes in that direction. Analytical data also suggests the occurrence of natural degradation due to a decrease in PCE and TCE and increase in daughter products over time in many wells (URS 2008b).

9.3 Surface Water

Surface Water Investigation	☐ Yes	☒ No
SPDES Permit (Current or Past)	☐ Yes	☒ No
Industrial Wastewater Discharge Permit (Current or Past)	☒ Yes	☐ No
Stormwater Data	☐ Yes	☒ No
Catch Basin Solids Data	☐ Yes	☒ No
Wastewater Data	☒ Yes	☐ No

9.3.1 Stormwater and Wastewater Systems

This site is located within the WPCP sewershed. No stormwater or wastewater infrastructure was identified in available site documents. Based on the site topography, stormwater at the site is expected to infiltrate into the ground or flow overland towards the western adjoining properties (see Figure 1). Stormwater may also drain to on-site infrastructure (if present) that discharges directly to Newtown Creek. Additionally, some portion of stormwater and wastewater discharges from the site flow into a combined municipal sewer system. When the combined flows exceed the system's capacity, untreated CSOs are discharged to Newtown Creek at multiple outfalls (outfall identification numbers unknown; NYCDEP 2007). Additionally, some wastewater at the site was discharged through floor drains near process areas to unknown outfalls or was collected and circulated through two ASTs (IEC 1998; Langan 2011).

9.3.2 SPDES Permit

Information reviewed in available documents indicates that the site has not been issued a current or historical State Pollutant Discharge Elimination System (SPDES) permit.

9.3.3 Industrial Wastewater Discharge Permit

Information reviewed in available documents indicates that the site was issued an Industrial Wastewater Discharge (IWD) Permit Number P-2689-1 (NYCDEP 1995a). Based on documents reviewed, the permit was in existence beginning in 1995 and renewed in 2003 to remain valid until 2008 (NYCDEP 2003).

Wastewater was generated at the site from the washing/cleaning and rinsing process of metal products made on site. There is a washing tank on site which contains a phosphate cleaner and a rinsing tank which uses clean water (NYCDEP 1995b). It was noted that the washing tank, which contains the phosphate cleaner, is piped to discharge to the sewer, but that the tank is kept closed and only discharged very sporadically (every 1 to 2 years). The rinsing tank is also connected to the sewer system and is continually discharging water while the tank is in use rinsing metal parts (NYCDEP 1995b). Additionally, floor drains were identified surrounding the process areas where the outfall could not be determined (Langan 2011).

Several Orders and Notices of Violation were issued after the IWD Permit was first issued in 1995 for failure to submit a baseline monitoring report, maintain logs, have adequate secondary containment surrounding tanks, and inadequacies in monitoring records (NYCDEP 1995a, 2004). These issues were resolved and no additional violations were found in reviewed records.

The most recent permit is presented in the following table:

<table>
<tr><th>Permit Type</th><th>Permit Number</th><th>Effective Date</th><th>Outfalls[1]</th><th>Volume</th><th>Frequency-Parameters</th></tr>
<tr><td>Industrial Wastewater Discharge Permit</td><td>03-P2689-1</td><td>06/02/93</td><td>Discharge Point E1: A 3-inch diameter pipe opening below the factory floor level, situated 15.5 inches from the interior wall facing Vandervoort Avenue, and 17 inches from the interior wall facing Lombardy Street</td><td>400 to 600 gallons per day</td><td>The process wastewater discharge from point E1 is covered by the Federal Metal Finishing Point Source Category, 40 CFR part 433, and shall not exceed these categorical standards:
<table>
<tr><th colspan="3">Federal Categorical Standards (40 CFR § 433.17 (a))</th></tr>
<tr><th>Pollutant</th><th>Daily Maximum (mg/L)</th><th>Maximum Monthly Average (mg/L)</th></tr>
<tr><td>Cadmium</td><td>0.11</td><td>0.07</td></tr>
<tr><td>Chromium (Total)</td><td>2.77</td><td>1.71</td></tr>
<tr><td>Copper</td><td>3.38</td><td>2.07</td></tr>
<tr><td>Lead</td><td>0.69</td><td>0.43</td></tr>
<tr><td>Nickel</td><td>3.98</td><td>2.38</td></tr>
<tr><td>Silver</td><td>0.43</td><td>0.24</td></tr>
<tr><td>Zinc</td><td>2.61</td><td>1.48</td></tr>
<tr><td>Cyanide (Total)</td><td>1.2</td><td>0.65</td></tr>
<tr><td>Total Toxic Organics[2]</td><td>2.13</td><td>--</td></tr>
</table></td></tr>
</table>

Permit Type	Permit Number	Effective Date	Outfalls[1]	Volume	Frequency-Parameters
			Discharge Point M1: An 8-inch diameter housetrap, located in a 34-inch by 31-inch by 97-inch pit, situated 104 inches from the exterior wall facing Anthony Street and 26 inches from the exterior wall facing Vandervoort Avenue.		

Sewer Use Limits (15 RCNY ch. 19)

Pollutant	Permissible Maximum Concentration For Any Given Time (mg/L)	Daily Average Maximum Concentration (mg/L)
pH	5.0-11.0 Standard Units	--
Cadmium	2	0.69
Chromium (Hexavalent)	5	--
Copper	5	--
Lead	2	--
Mercury	0.05	--
Nickel	3	--
Zinc	5	--
Cyanide (Amenable to Chlorination)	0.2	--
Non-Polar Material	50	--

Notes:
1 – This site is within the Newtown Creek Sewershed.
2 – Defined in 40 CFR § 433. 11 (e) as the sum of all quantifiable values greater than 0.01 milligrams per liter of the 111 toxic organic compounds listed in the IWD permit. Toxic organic compounds are comprised of two subcategories: volatile organic compounds and semi-volatile organic compounds. There are different sampling methods for each subcategory (see Part I, Sect. B. Monitoring Requirements).

ch. – chapter
CFR – Code of Federal Regulations
mg/L – milligram per liter
RCNY – Rules of the City of New York

9.3.4 Sampling Data

Limited sampling data was found in material reviewed while preparing this site summary. Self Monitoring Reports (SMR) were found from 1996 indicating that the site was in compliance with the discharge requirements of the IWD Permit (ACME Architectural Products 2006a, 2006b).

9.3.5 Surface Water Summary

No site specific information related to surface water or stormwater and wastewater investigations was found in reviewed documents. Records reviewed indicate that collected stormwater is discharged directly to Newtown Creek or to the combined sewer system. Wastewater generated at the site was treated via an on-site system and discharged directly to Newtown Creek or to the combined sewer system. Floor drains in the processing areas were identified where the associated outfall could not be determined.

9.4 Sediment

Creek Sediment Data ☐ Yes ☐ No ☒ Not Applicable

9.5 Air

Air Permit ☐ Yes ☒ No

Air Data ☐ Yes ☒ No

A Title V Facility Air Permit exists for this site. The permit applies to the combined emissions of the buildings used in ACME Architectural Products, Inc., manufacturing. A RCRA inspection conducted in 2005 noted that there was an air permit for the oven operated at the site (USEPA 2005). No copy of this permit was found in the records reviewed for this summary.

10 REMEDIATION HISTORY (INTERIM REMEDIAL MEASURES AND OTHER CLEANUPS)

In December 2010, the Whitehead Company and NYSDEC entered into an Order on Consent to prepare a separate site-specific RI work plan to identify sources of CVOCs to the

extent they may be present (Langan 2011). At the time this summary was prepared, the RI work plan was being reviewed by NYSDEC but had not been finalized (NYSDEC 2011). As part of Order on Consent environmental records searches and site visits were completed for each of the properties operated by ACME including the Steel/Metal Works site. The records review was to assist in the design of site-specific work plans to investigate and identify sources of CVOCs, to the extent they may be present (Langan 2011).

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12 ATTACHMENTS

Figures

Figure 1 Site Vicinity Map: ACME Steel/Metal Works

Tables

Table 1 Potential Areas of Concern and Transport Pathways Assessment

Supplemental Attachments

Attachment 1 Site layout. (ACME Steel Door 1995)

Attachment 2 Figure 1. Meeker Avenue Plume Trackdown Site Location Map (URS 2008b)

Attachment 3 Figure 38. Meeker Avenue Plume Trackdown Site Source Areas (URS 2008b)

Attachment 4 Figure 36. Meeker Avenue Plume Trackdown Site Proposed Phase IV Monitoring Well Locations (URS 2009a)

Attachment 5	Figure 33. Meeker Avenue Plume Trackdown Site – Phase III Potential Contamination Sources with Tetrachloroethene Isoconcentration Contours in Groundwater (URS 2008b)
Attachment 6	Figure 35. Meeker Avenue Plume Trackdown Site – Phase III Potential Contamination Sources with Trichloroethene Isoconcentration Contours in Groundwater (URS 2008b)
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Table 1

Potential Areas of Concern and Transport Pathways Assessment – ACME Steel/Metal Works

Potential Areas of Concern	Media Impacted					COPCs															Potential Complete Pathway						
						TPH			VOCs																			
Description of Areas of Concern	Surface Soil	Subsurface Soil	Groundwater	Catch Basin Solids	Creek Sediment	Gasoline-Range	Diesel – Range	Heavier – Range	Petroleum Related (e.g., BTEX)	VOCs	Chlorinated VOCs	SVOCs	PAHs	Phthalates	Phenolics	Metals	PCBs	Herbicides and Pesticides	Dioxins/Furans	Overland Transport	Groundwater	Direct Discharge – Overwater	Direct Discharge – Storm/Wastewater	Discharge to Sewer/CSO	Bank Erosion	Air Release
Structural Steel and Iron Works/Metal Finishing Operations	?	?	?	?	?	--	?	?	?	?	?	?	?	?	?	?	?	?	?	--	?	--	?	?	--	?
Regulated Waste Transfer between ACME Locations/Storage	?	?	?	?	?	--	?	?	?	√	√	--	√	--	--	--	--	--	--	--	?	--	?	?	--	?
ACME Chemical Storage	?	?	?	?	?	--	√	√	?	√	√	--	√	--	--	--	--	--	--	--	?	--	?	?	--	?
ACME Paint Booths	?	?	?	?	?	--	--	--	--	?	?	--	--	--	--	?	--	--	--	--	?	--	?	?	--	?
ACME Oven	?	?	?	?	?	--	?	?	?	?	?	?	?	--	--	?	--	--	--	--	?	--	?	?	--	?
ACME Chemical Phosphating/Metal Pretreatment Operations	?	?	?	?	?	--	--	--	?	√	√	--	--	--	--	√	--	--	--	--	?	--	√	√	--	?
ACME Wastewater ASTs	?	?	?	?	?	--	--	--	--	?	?	--	--	--	--	?	--	--	--	--	?	--	?	?	--	?
ACME Degreasing Dip Tank (UST) and Operations	?	?	?	?	?	--	--	--	--	?	?	--	--	--	--	?	--	--	--	--	?	--	?	?	--	?
Unknown Status Fuel USTs	√	?	?	?	?	?	√	√	?	?	--	?	?	--	--	--	--	--	--	--	?	--	?	?	--	?
Petroleum impacted soil	√	?	?	?	?	?	?	?	?	?	--	?	?	--	--	--	--	--	--	--	?	--	--	--	--	?
Process Area Floor Drains with unknown outfalls/discharge points	?	?	?	?	?	--	--	--	?	?	?	--	--	--	--	--	--	--	--	--	?	--	√	√	--	?

Notes:
√ – COPCs are/were present in areas of concern having a current or historical pathway that is determined to be complete or potentially complete.
? – There is not enough information to determine if COPC is/was present in area of concern or if pathway is complete.
-- – Current or historical pathway has been investigated and shown to be not present or incomplete.

AST – aboveground storage tank
BTEX – benzene, toluene, ethylbenzene, and xylene
COPC – constituent of potential concern
CSO – combined sewer overflow
PAH – polycyclic aromatic hydrocarbon
PCB – polychlorinated biphenyl
SVOC – semi-volatile organic compound
TPH – total petroleum hydrocarbon
UST – underground storage tank
VOC – volatile organic compound

- USEPA Sample Locations (Surface and Subsurface)
- Shoreline (NYC Dept. of Information Technology, 2006)
- USGS Nat'l Elev. Dataset 5-foot Contours
- Selected Site Property Boundary
- Neighboring Site Property Boundary

Outfall Class
- Direct Discharge
- General
- Highway Drain
- Major Stormwater Outfall
- SPDES
- Storm Drain

NOTES:
1. Outfall Labeling: BB: Bowery Bay; NC(B/Q): Newtown Creek, Brooklyn/Queens; ST: Stormwater.
2. Outfall locations are preliminary, compiled, estimated data based on New York City Department of Environmental Protection (NYCDEP) maps and tabulated data and other resources. Many outfall locations were taken from the New York City Shoreline Survey Program: Newtown Creek Water Pollution Control Plant Drainage Area, NYCDEP, March 31, 2003. Other locations were taken from an excerpt from a similar report from 2008 (the complete report was not included in files available for review). Finally, some outfall locations were inherited from previous Anchor QEA and Newtown Creek Project work. Latitudinal and longitudinal data provided in the 2003 and 2008 NYCDEP reports were rounded to the nearest second. This resulted in potential outfall location discrepancies of up to approximately 200 feet. All outfall locations are currently under field verification.
3. Aerial Photos: New York State Division of Homeland Security and Emergency Services, 2010.
4. Site Boundaries are based on New York City parcels data.
5. Coarse topographic contours are derived from U.S. Geological Survey 10-meter data.

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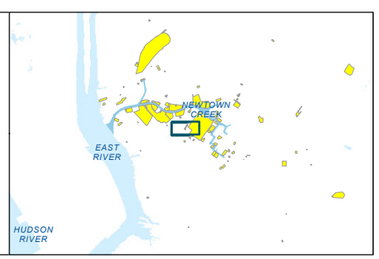


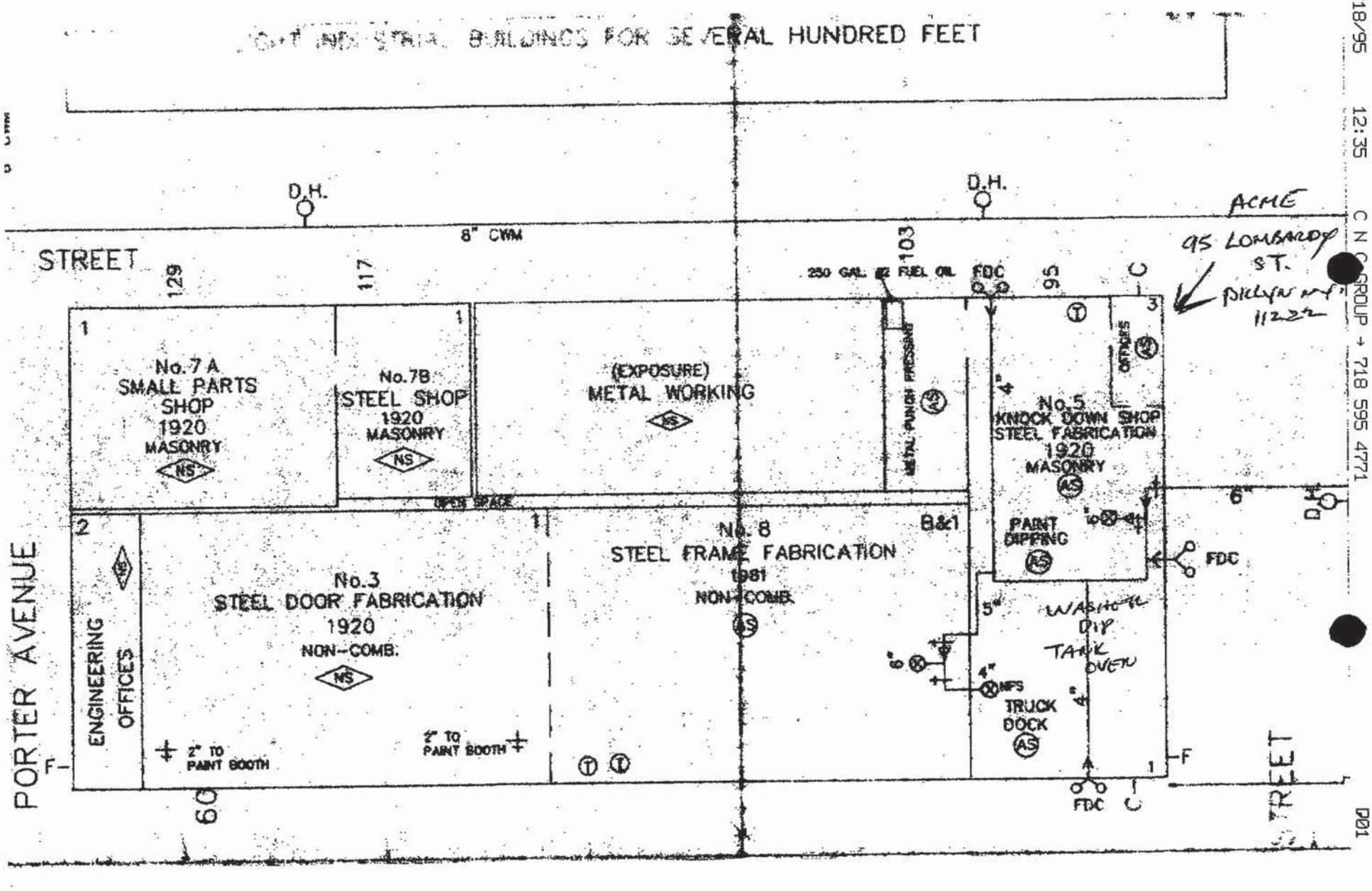
ANCHOR QEA

DRAFT

Figure 1
Site Vicinity Map
Draft Upland Site Summary: ACME Steel/Metal Works
Newtown Creek RI/FS

SUPPLEMENTAL ATTACHMENTS

Attachment 1



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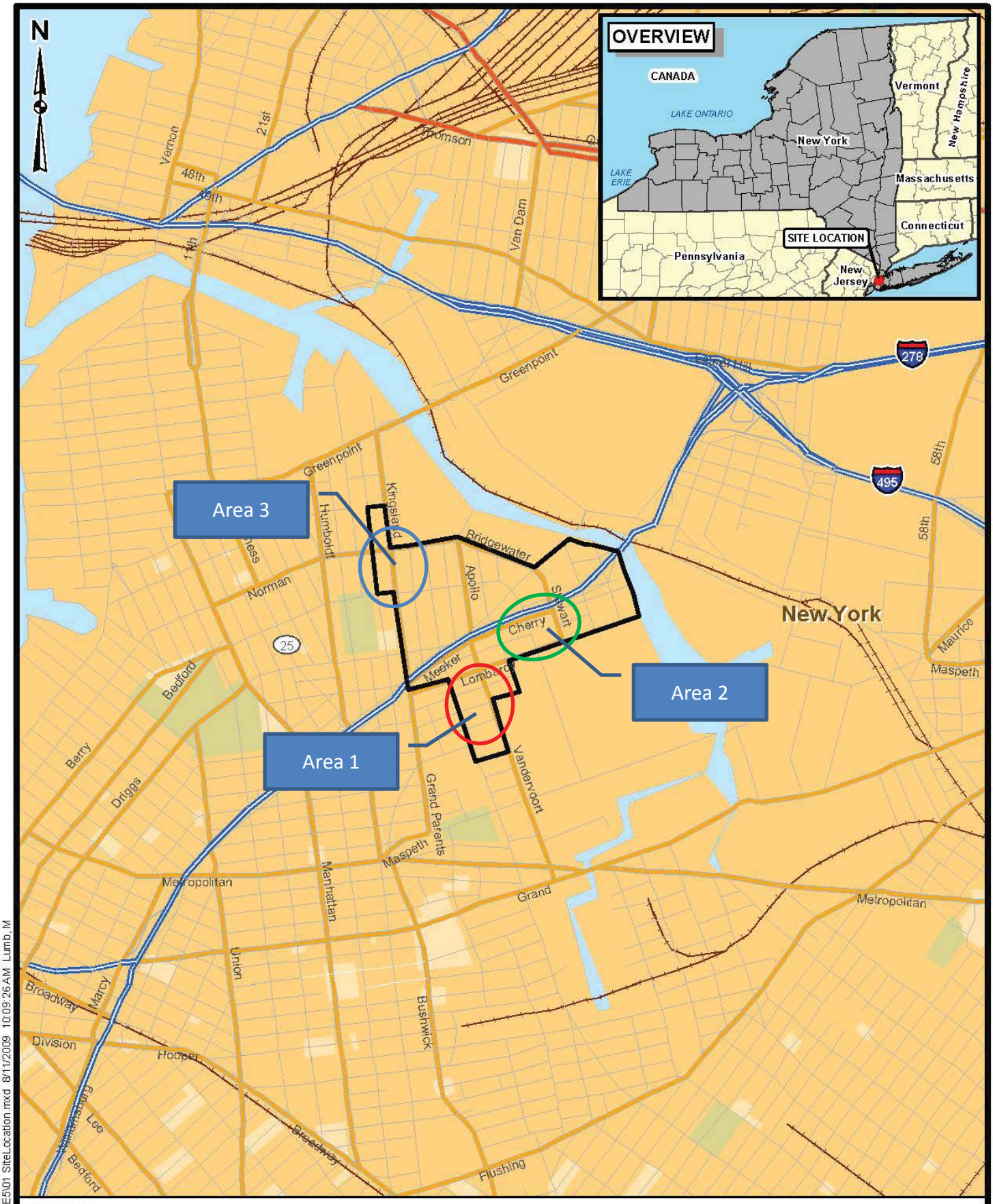

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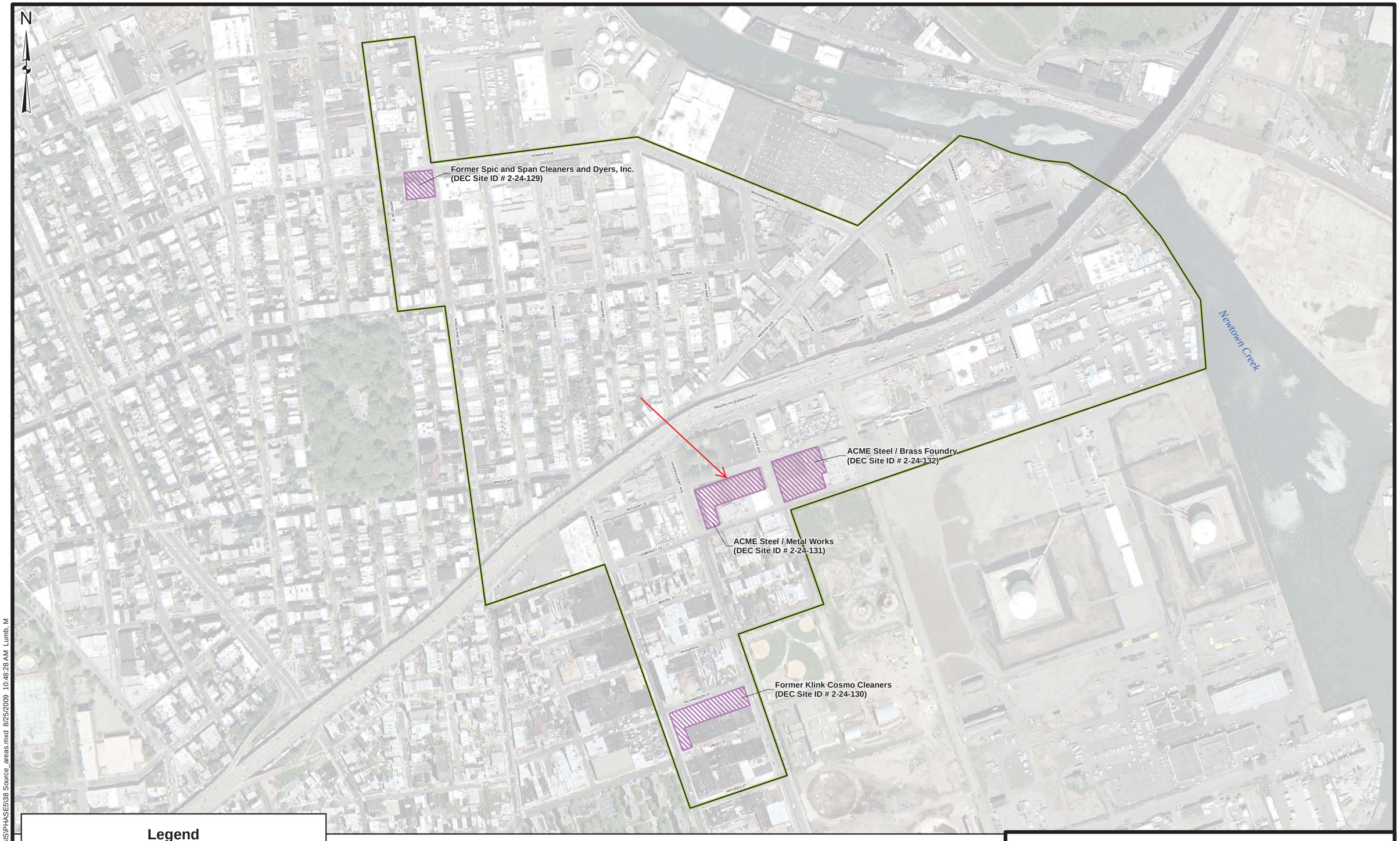
URS	MEEKER AVENUE PLUME TRACKDOWN SITE SITE LOCATION MAP	FIGURE 1

Attachment 3



Legend

- Project Boundary (DEC Site ID # 2-24-121)
- Tetrachloroethene / Trichloroethene Sources

MEEKER AVENUE PLUME TRACKDOWN SITE
SOURCE AREAS

URS

FIGURE 38

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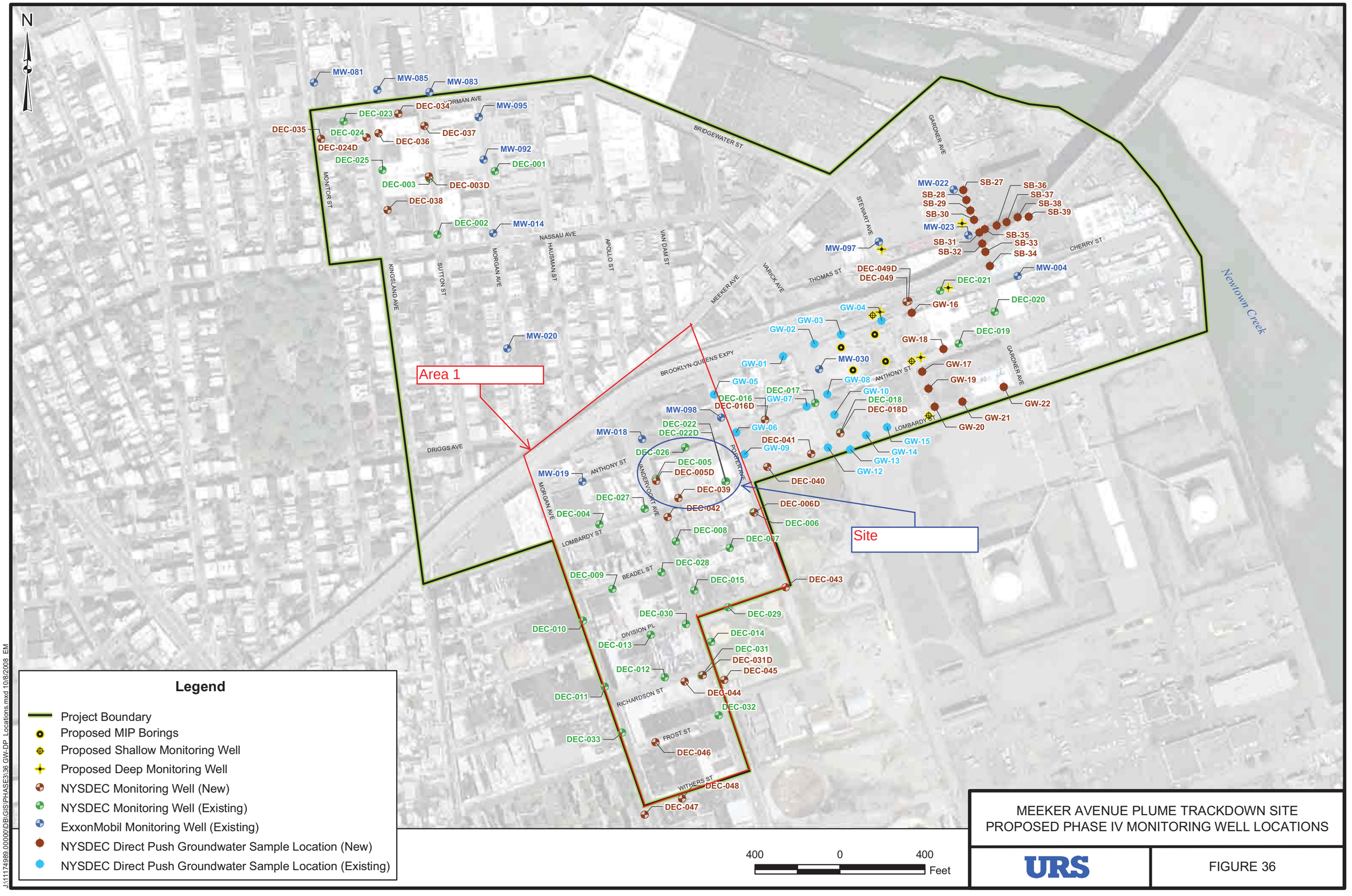
Attachment 4



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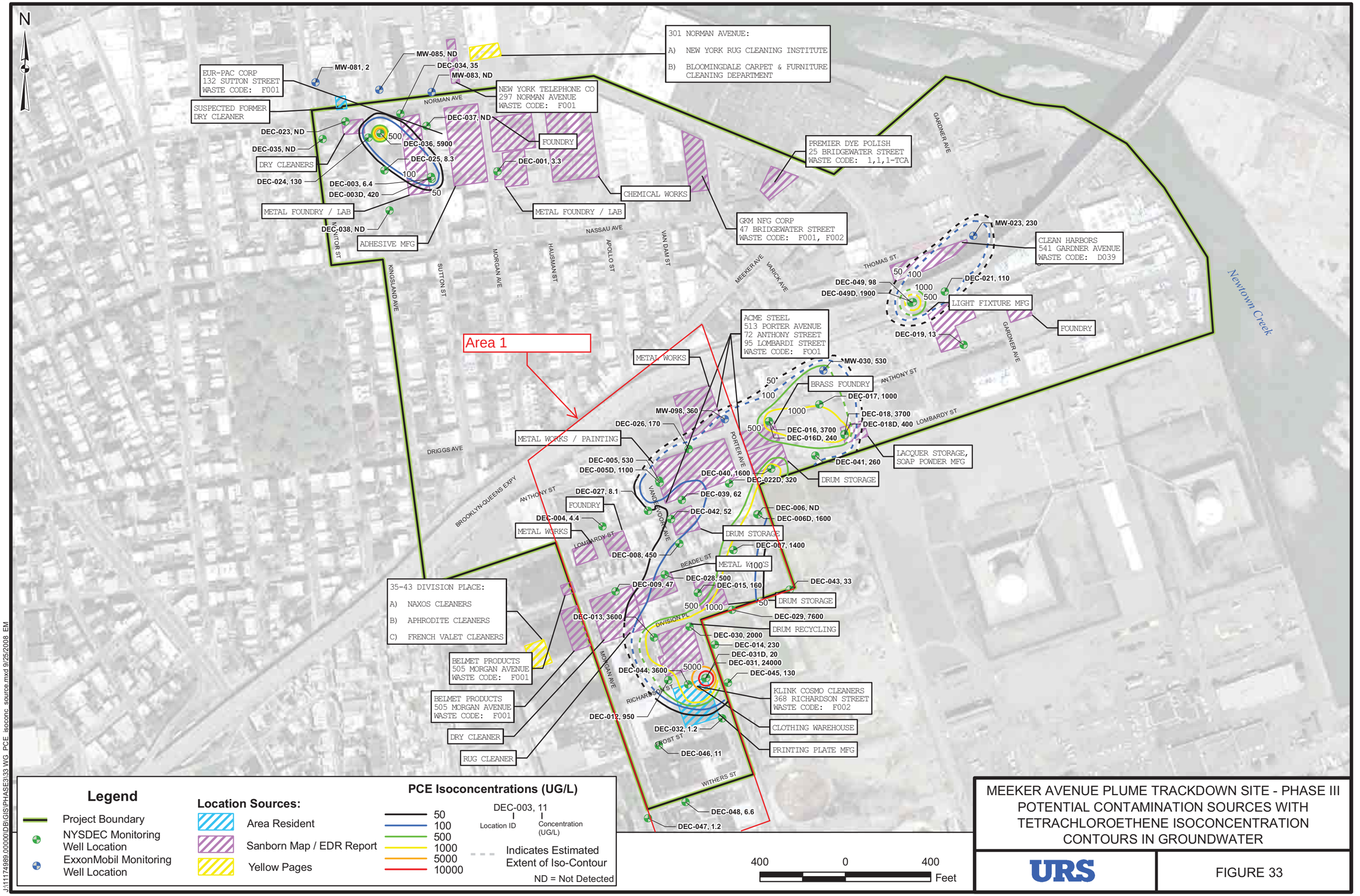
MEEKER AVENUE PLUME TRACKDOWN SITE
PROPOSED PHASE IV MONITORING WELL LOCATIONS

URS

FIGURE 36

Attachment 5



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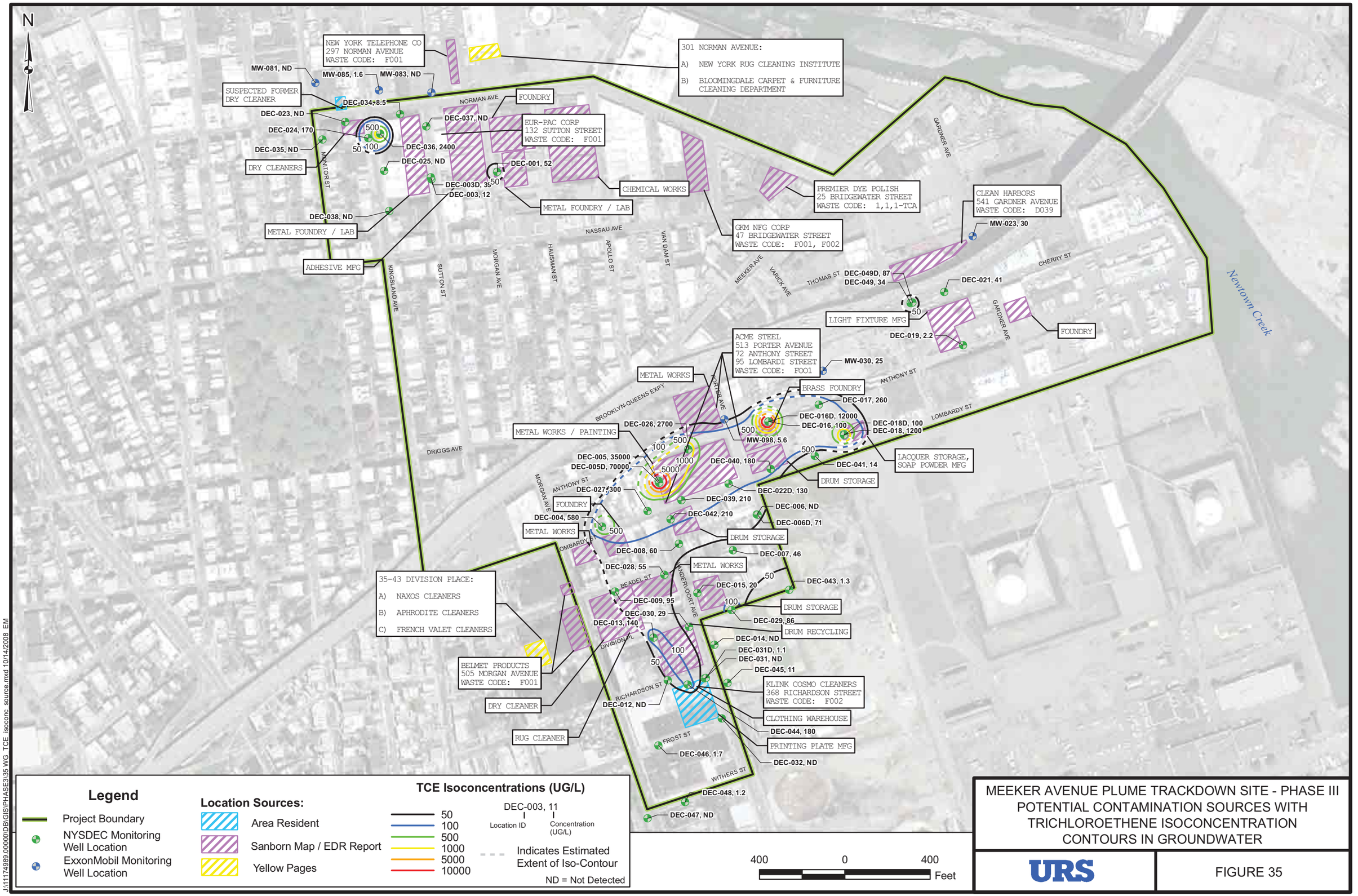
MEEKER AVENUE PLUME TRACKDOWN SITE - PHASE III
POTENTIAL CONTAMINATION SOURCES WITH TETRACHLOROETHENE ISOCONCENTRATION CONTOURS IN GROUNDWATER

URS

FIGURE 33

Attachment 6



MEEKER AVENUE PLUME TRACKDOWN SITE - PHASE III
POTENTIAL CONTAMINATION SOURCES WITH TRICHLOROETHENE ISOCONCENTRATION CONTOURS IN GROUNDWATER

URS

FIGURE 35

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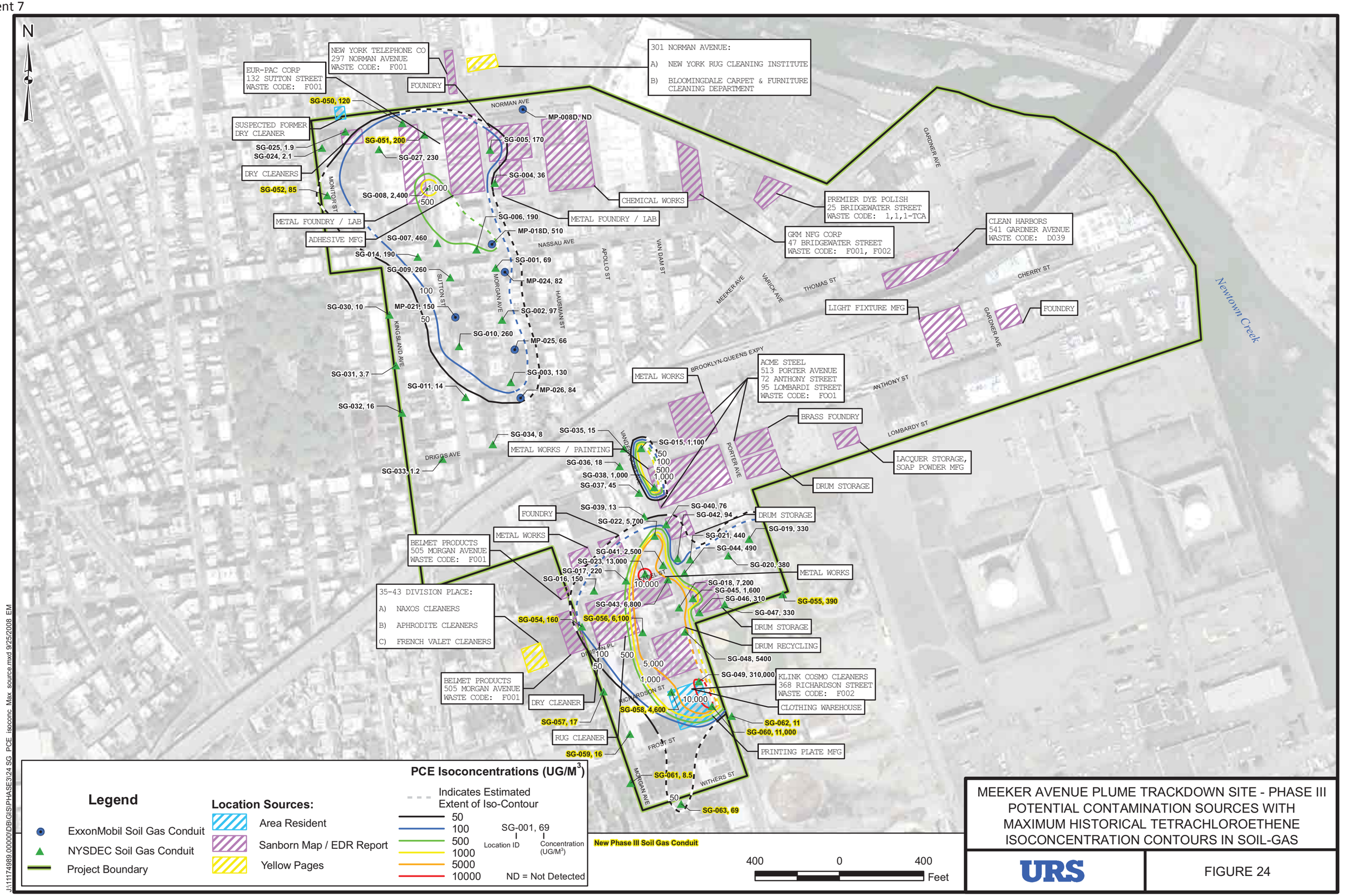
Attachment 7



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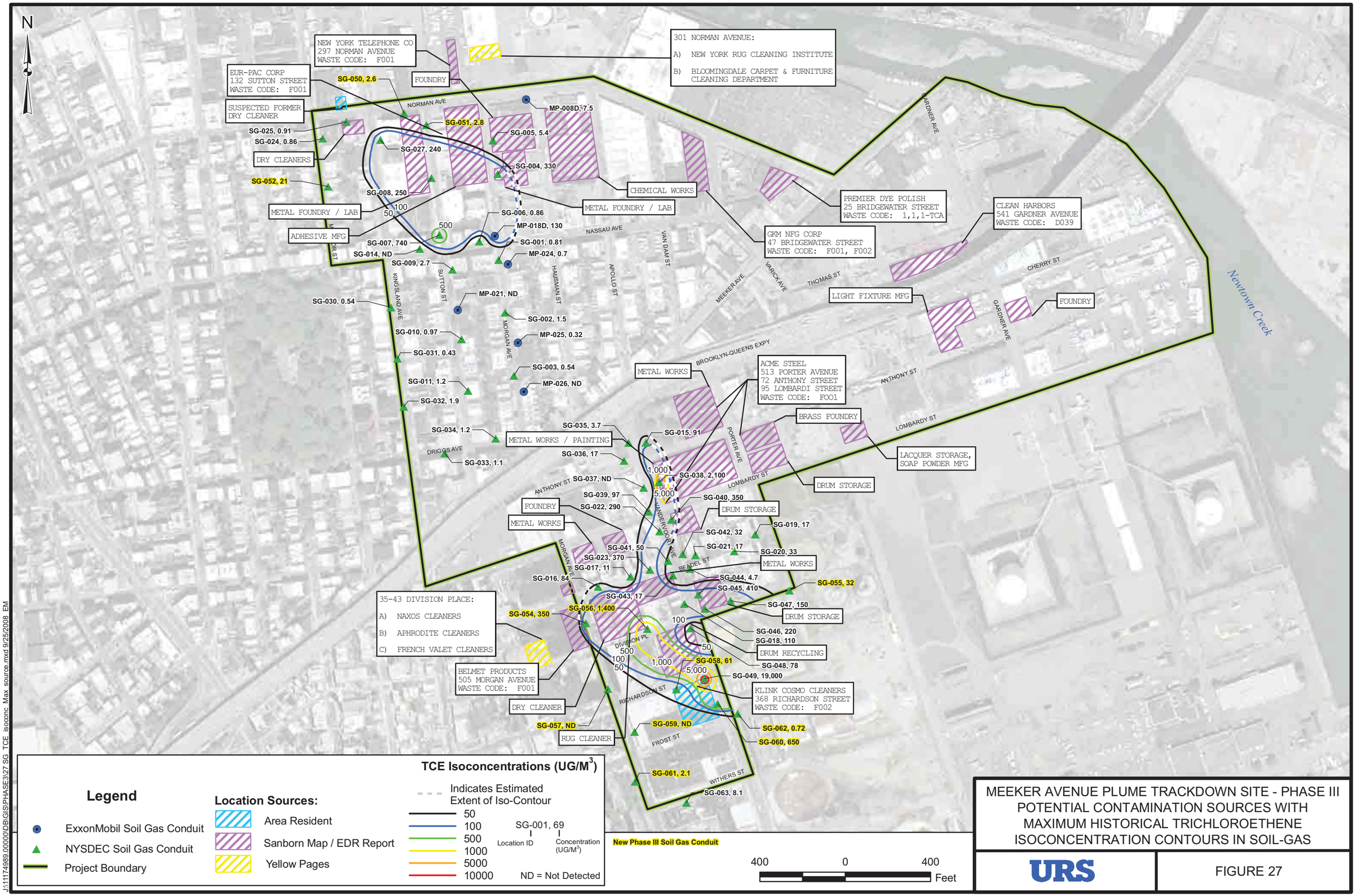
MEEKER AVENUE PLUME TRACKDOWN SITE - PHASE III
POTENTIAL CONTAMINATION SOURCES WITH MAXIMUM HISTORICAL TETRACHLOROETHENE ISOCONCENTRATION CONTOURS IN SOIL-GAS

URS

FIGURE 24

Attachment 8



MEEKER AVENUE PLUME TRACKDOWN SITE - PHASE III
POTENTIAL CONTAMINATION SOURCES WITH MAXIMUM HISTORICAL TRICHLOROETHENE ISOCONCENTRATION CONTOURS IN SOIL-GAS

URS

FIGURE 27

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